



Todd Lewis

Jarrell Waggoner





SOPA/PIPA Lose More
Supporters On
'Blackout Day'



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Health Car
2012 Elect

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Mayor Bloomberg Will Learn How To Write Code In 2012



SIPA USA/SIPA/Newscom

2012: Code Year

FILED UNDER *Software, Alt*

NYC opening its first public high school dedicated to software engineering

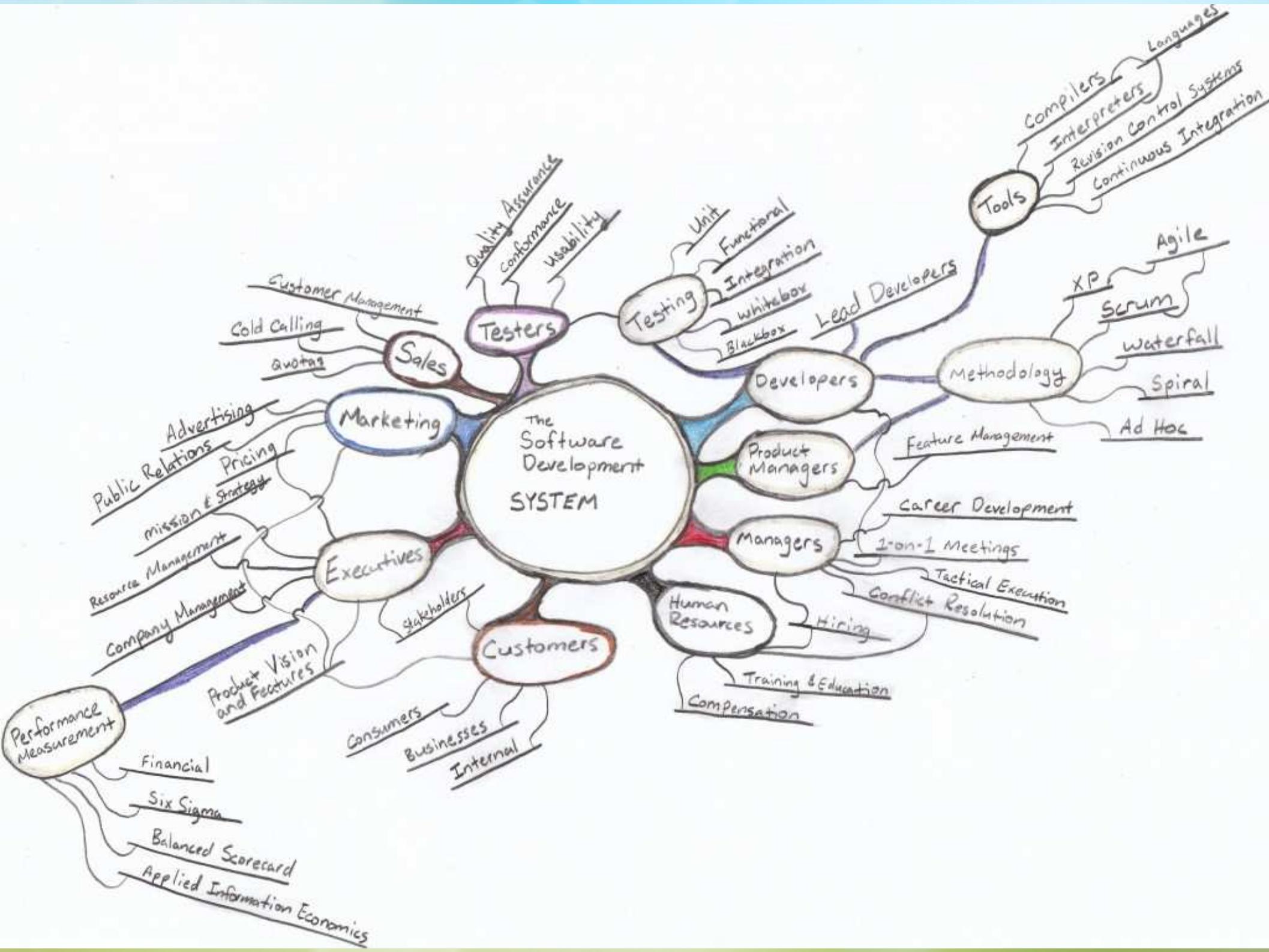
By *Terrence O'Brien* posted Jan 17th 2012 4:44AM

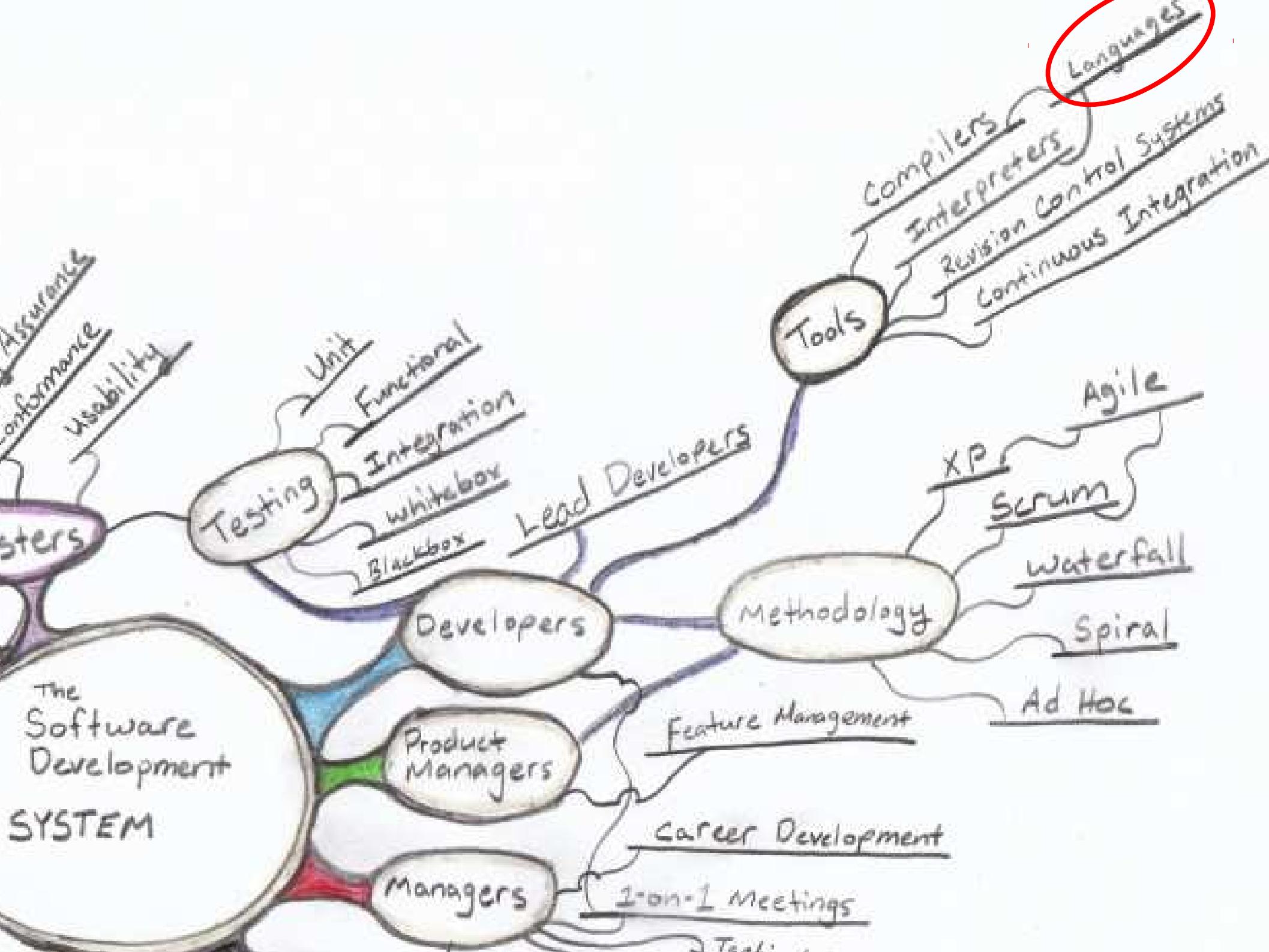


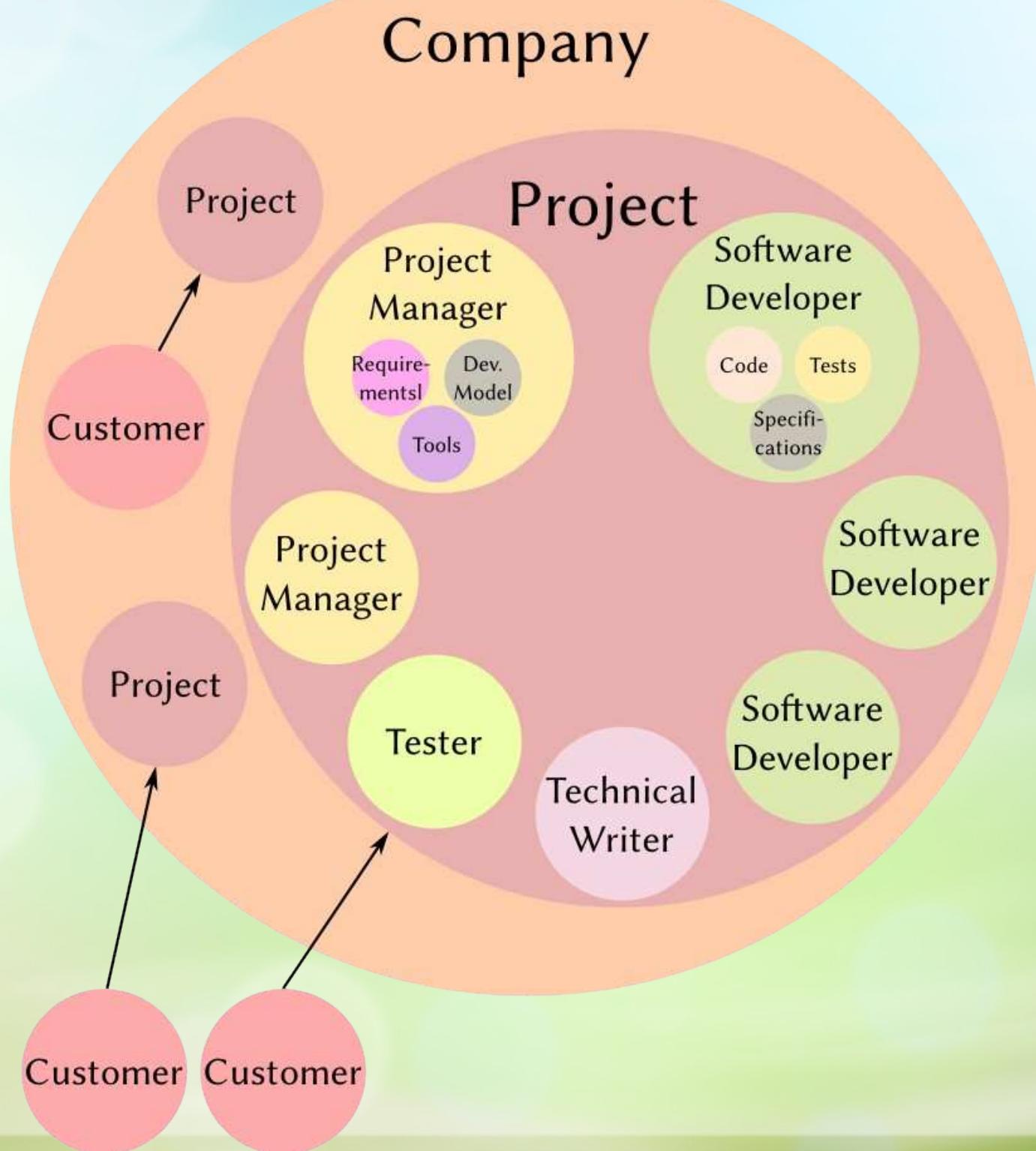
"Coding is the new Latin"

–Alex Hope, Double-Negative Ltd.

what { Code
Open Source } is, and
Why it's important







"Program or be programmed"

–Douglas Rushkoff, CNN

Languages

- C

```
void quick_sort (int *a, int n) {  
    if (n < 2)  
        return;  
    int p = a[n / 2];  
    int *l = a;  
    int *r = a + n - 1;  
    while (l <= r) {  
        while (*l < p)  
            l++;  
        while (*r > p)  
            r--;  
        if (l <= r) {  
            int t = *l;  
            *l++ = *r;  
            *r-- = t;  
        }  
    }  
    quick_sort(a, r - a + 1);  
    quick_sort(l, a + n - 1);  
}
```

Languages

- Python

```
def qsort(L):  
    return (qsort([y for y in L[1:] if y < L[0]]) +  
            L[:1] +  
            qsort([y for y in L[1:] if y >= L[0]]))  
    if len(L) > 1 else L
```

Languages

- Shakespeare

Romeo, a young man with a remarkable patience.

Juliet, a likewise young woman of remarkable grace.

Ophelia, a remarkable woman much in dispute with Hamlet.

Hamlet, the flatterer of Andersen Insulting A/S.

Act I: Hamlet's insults and flattery.

Scene I: The insulting of Romeo.

[Enter Hamlet and Romeo]

Hamlet:

You lying stupid fatherless big smelly half-witted coward! You are as stupid as the difference between a handsome rich brave hero and thyself!

Speak your mind!

You are as brave as the sum of your fat little stuffed misused dusty old rotten codpiece and a beautiful fair warm peaceful sunny summer's day. You are as healthy as the difference between the sum of the sweetest reddest rose and my father and yourself! Speak your mind!

You are as cowardly as the sum of yourself and the difference between a big mighty proud kingdom and a horse. Speak your mind.

Speak your mind!

[Exit Romeo]

Languages

• Chef

Hello World Souffle.

Ingredients.

72 g haricot beans
101 eggs
108 g lard
111 cups oil
32 zucchinis
119 ml water
114 g red salmon
100 g dijon mustard
33 potatoes

Method.

Put potatoes into the mixing bowl.
Put dijon mustard into the mixing bowl.
Put lard into the mixing bowl.
Put red salmon into the mixing bowl.
Put oil into the mixing bowl.
Put water into the mixing bowl.
Put zucchinis into the mixing bowl.
Put oil into the mixing bowl.
Put lard into the mixing bowl.
Put lard into the mixing bowl.
Put eggs into the mixing bowl.
Put haricot beans into the mixing bowl.
Liquefy contents of the mixing bowl.
Pour contents of the mixing bowl into the baking dish.
Serves 1.

Recipe Writing



- Programming as writing a recipe
 - May be used by many chefs (computers)
 - Can be done in many styles
 - Can be written in many languages
 - Different ingredients to create the same meal
 - Different meals are tastier (buggier) than others
 - Different types of meals (specialties)
- Recipe Testers

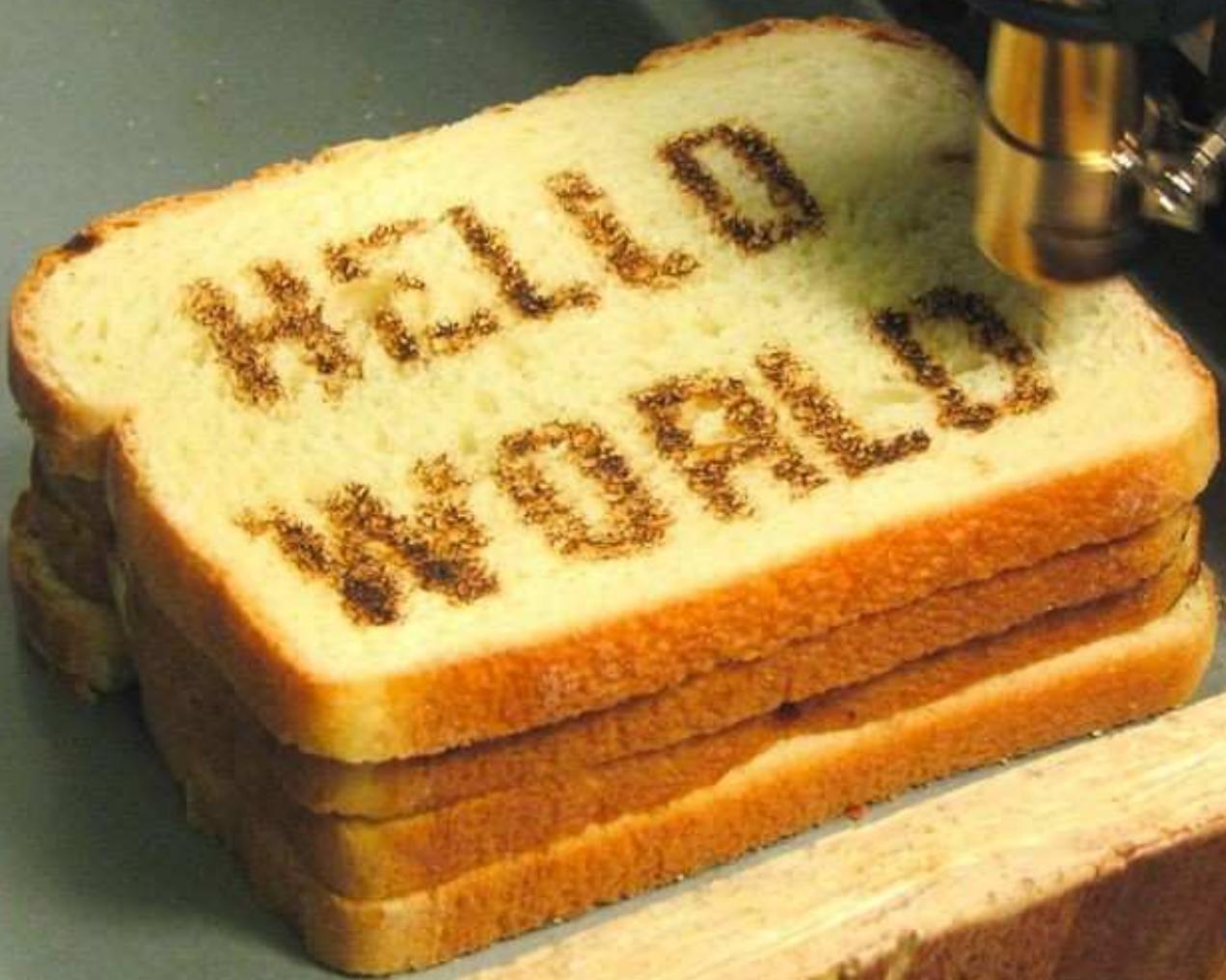
“Cook” (Compile) the Recipe

Turn the code into a language the computer can understand:

```
main()
{
    printf("Hello, world\n");
}
```

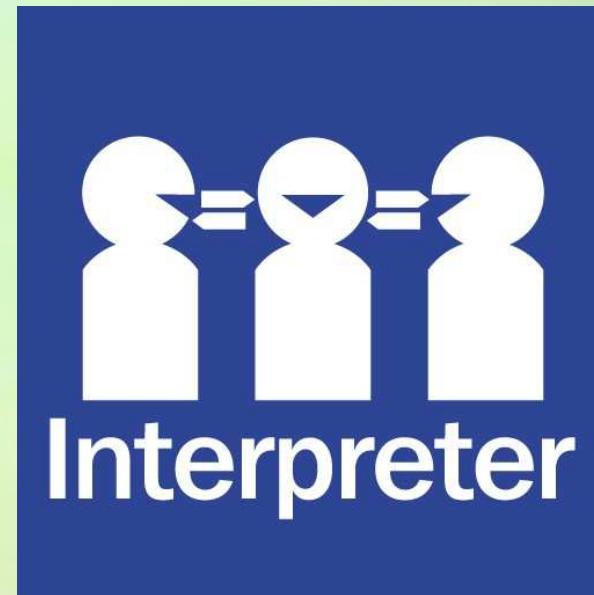
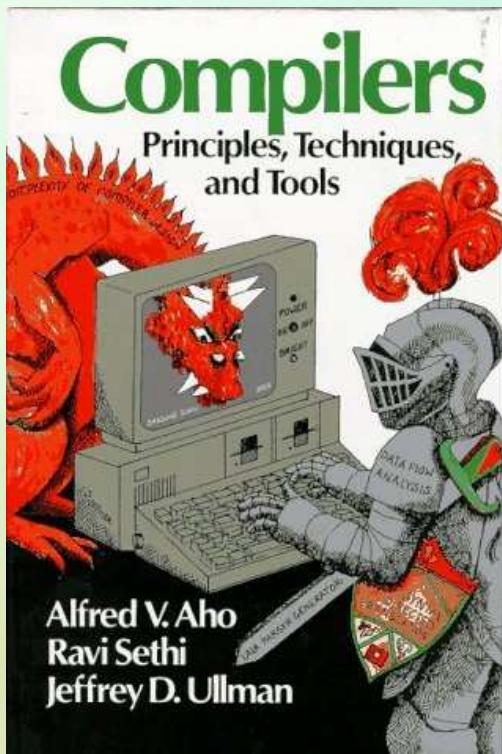
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Deploying Code

- Compiler
 - Converts code to a language a computer can read all at once
 - Very, very fast
- Interpreter
 - Sits in background and converts code as needed
 - Slower, but more flexible



Developer Specialties

- Frontend vs. Backend
- Application vs. Systems
- Architects vs. Maintenance
- Developers vs. Engineers vs. Scientists vs. Analysts
- Web vs. Database vs. System vs. Game vs. Cloud

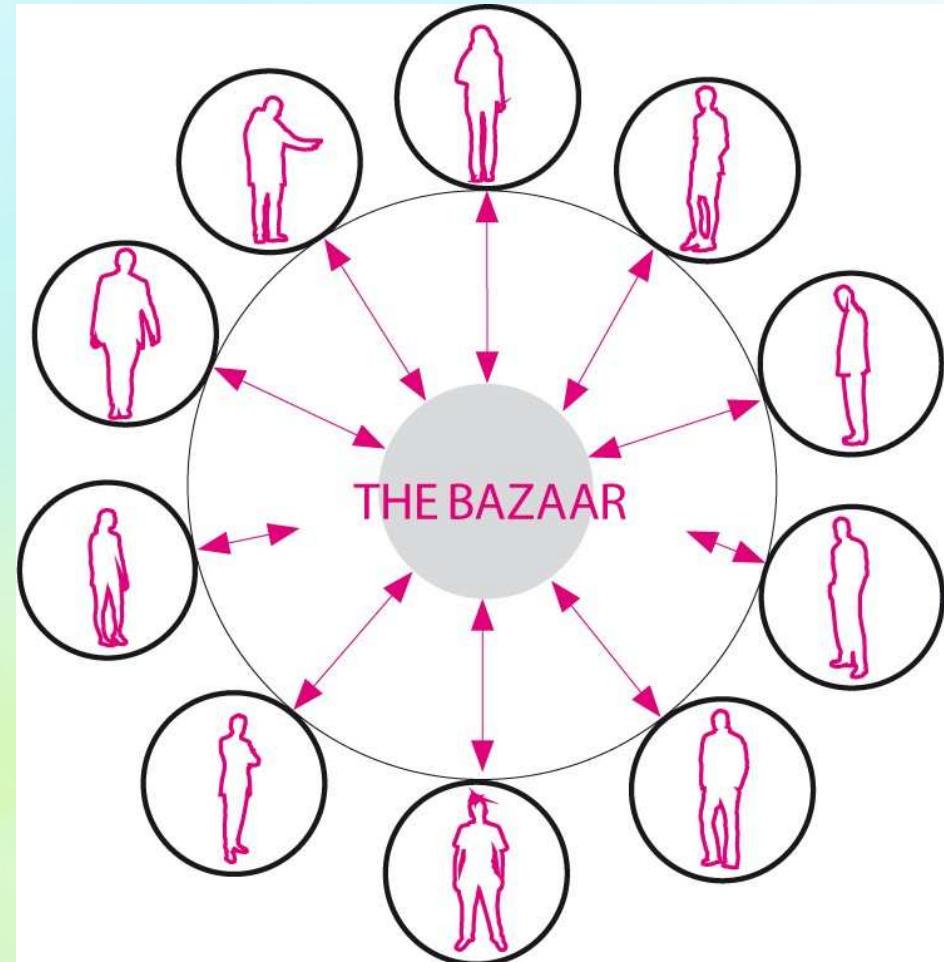
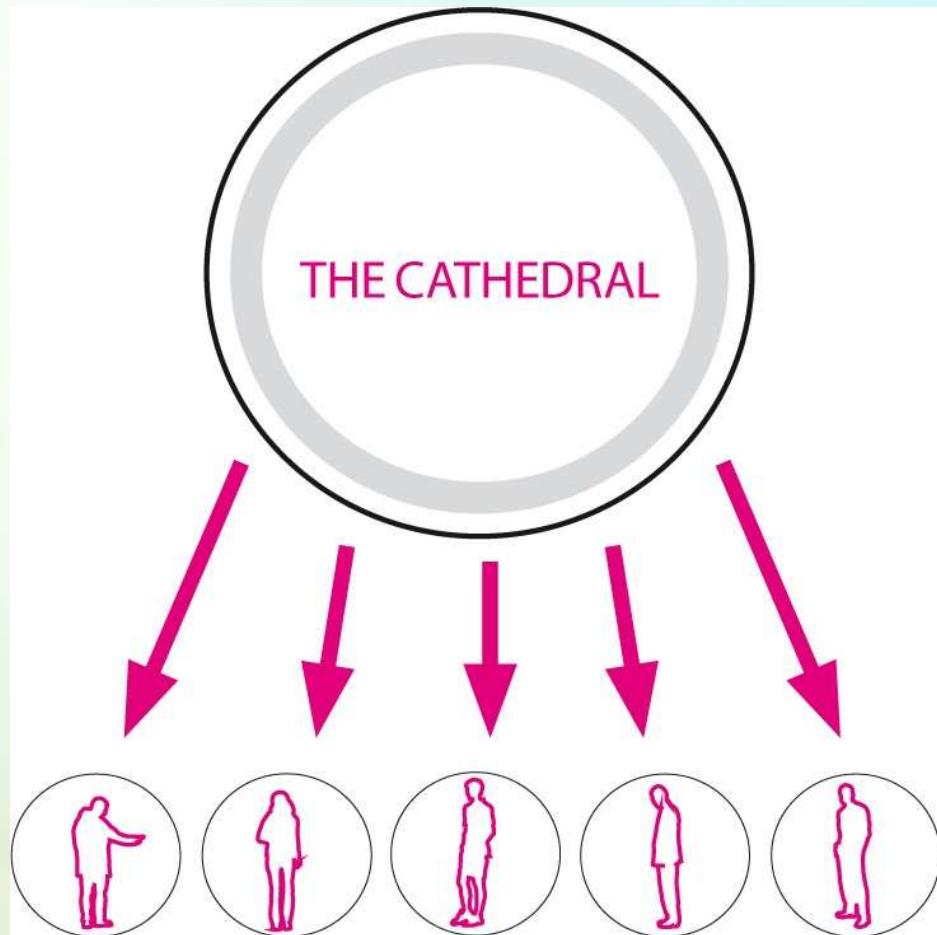
what { Code
Open Source } is, and
Why it's important

"Knowledge is the only resource
that multiplies when you share it."

Development Methodology



Development Methodology



*"The most important book about technology today,
with implications that go far beyond programming."*
— Guy Kawasaki

Revised & Expanded

THE CATHEDRAL & THE BAZAAR

MUSINGS ON LINUX AND OPEN SOURCE
BY AN ACCIDENTAL REVOLUTIONARY



ERIC S. RAYMOND

WITH A FOREWORD BY BOB YOUNG, CHAIRMAN & CEO OF RED HAT, INC.

Proprietary vs. Open



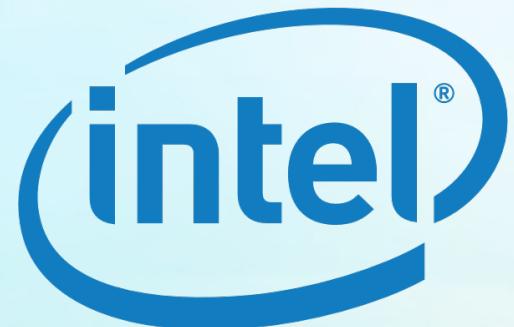
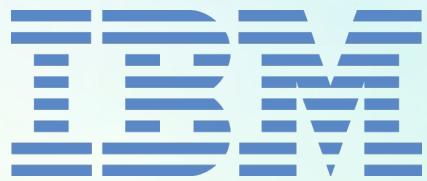
Case Study



- Internet Explorer
 - Funded by Microsoft
 - Security up to Microsoft alone
 - Community can complain
 - Dedicated to making profit for Microsoft
- Firefox
 - Run by Mozilla
 - Routinely vetted for security by experts
 - Community can contribute anything
 - Dedicated to making the internet better for everyone



Using open source...



80% of companies use Open
Source in some way.

"When it comes to hiring, I'll take a Github commit log over a resume any day."

–John Resig, Khan Academy



When you buy Microsoft



You live in Microsoft's world.

When you buy Apple



You live in Apple's world.

When you buy Free and
Open Source



You live in the real world.

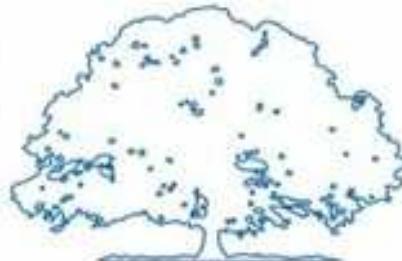
But...

Why Open Source?

- Distributes cost of development
 - “Commons-based peer production”
- Better reliability and security – seen by more eyes
- Control for efficiency tradeoff
 - Community can help develop and maintain
 - Existing OSS might solve a business problem
- Freedom from control vs. one vendor
- Value/innovation created when developers are free from legal constraints – Google's 20% time

Raleigh Public Record

we've got raleigh covered.

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* [NEWS](#) * [CITY COUNCIL](#) * COMMITTEE PASSES "OPEN SOURCE CITY" RESOLUTION

Committee Passes "Open Source City" Resolution

By CHARLES C. DUNCAN PARDO

January 25, 2012 | Posted in: [City Council](#), [News](#), [The Latest](#) | Tags: [open source](#), [Red Hat](#), [technology committee](#) | 1 Response



A Raleigh City Council committee gave its stamp of approval to a resolution that could make public city data easier to access and change the way the city buys software.

The Technology and Communications Committee, a new group of city councilors created late last year, approved the Open Source Government resolution Tuesday night. It will go to the full council next week.

The resolution has two parts. First, it proposes to create a new page on the City of Raleigh website to share city data, such as computer processable budget information, map data, or public art data.

"Software is eating the world"

—Marc Andreessen, Andreessen-Horowitz, Netscape

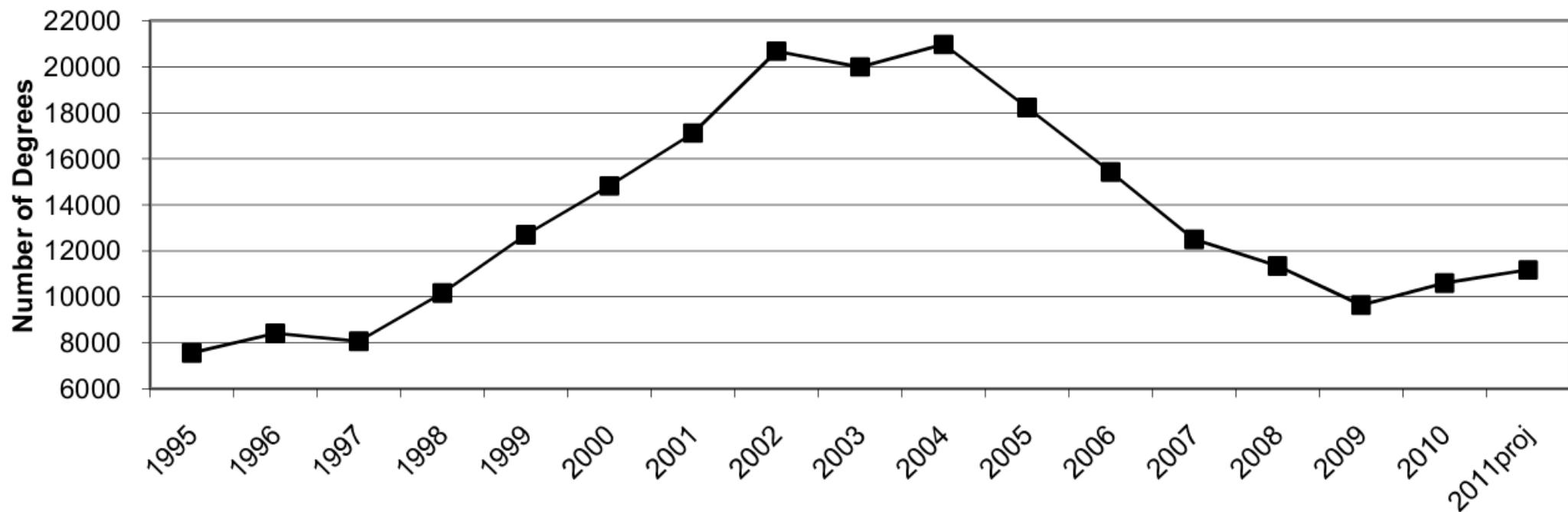
Software's Appetite

- Book sales? Amazon
 - Video rentals? Netflix
 - Movies? Pixar
 - Music? iTunes, Pandora, Spotify
 - Advertising? Google, Groupon
 - Photography? Everyone but Kodak
 - Telecom? Skype
 - HR? LinkedIn
- + Completely new industries

Job Growth over 10 Years

1. Software Developer (32%)
2. Physical Therapist (30%)
3. Financial Adviser (30%)
4. Civil Engineer (24%)
5. Marketing Specialist (28%)
6. Management Consultant (24%)
7. Information Technology Consultant (20%)
8. Database Administrator (20%)
9. Financial Analyst (20%)
10. Environmental Engineer (31%)

Bachelor's Degrees



Why the drop?

The bubble + outsourcing

OS in Education

- Students can **participate** at every level of the process
- Professors can give students real-world **projects**
- Possible to learn the internals of **complex systems**
- Access to professional-grade **tools**

what { Code
Open Source } is, and
Why it's important

What are we doing?



2012

POSSCON

PALMETTO OPEN SOURCE SOFTWARE CONFERENCE

MARCH 28 & 29, 2012

at the
COLUMBIA METROPOLITAN
CONVENTION CENTER

COLUMBIA, SOUTH CAROLINA

POSSCON.ORG



Bringing Open Source to the Southeast

DEVELOPERS – EDUCATORS – IT LEADERS IN BUSINESS, GOVERNMENT, HEALTHCARE AND SECURITY

POSSCON 2011

- 500+ attendees from 24 states
- 30 colleges and universities
(Darmouth, Duke, MIT Media Lab, USC, Georgia Tech, Clemson, SUNY-Buffalo, NC State)
- Approximately 100 business and government organizations
- Biggest names in US – Red Hat, IBM, Microsoft, Oracle, Google, HP, Verizon Wireless, GitHub
- 200 hotel room nights
- Many meals and additional spending

Bringing Open Source to the Southeast
DEVELOPERS • EDUCATORS • IT LEADERS IN BUSINESS, GOVERNMENT, HEALTHCARE AND SECURITY



How Far We've Come

2008

120

from
South Carolina

2009

240

from 4 states
(SC, NC, GA, FL)

2010

350

from 14 states
(Convention Center)

2011

500+

from 24 states

Bringing Open Source to the Southeast
DEVELOPERS • EDUCATORS • IT LEADERS IN BUSINESS, GOVERNMENT, HEALTHCARE AND SECURITY



Unprecedented Opportunity

- Are at critical juncture – Year 5
- Branded well and have gotten people interested
- IT infrastructure/IT-oLogy and Open IT Lab
- Economic development
- If we do well – National destination conference that showcases Columbia/Midlands/SC

Quotes

Should you find yourself near Columbia, POSSCON 2012 would be a wonderful addition to your quest for all things open source.

– Leslie Hawthorn, Google

Imagine if OSCON and OSBC had a baby: its name would be POSSCON. I REALLY enjoyed the POSSCON experience totally, and would be more than happy to attend and speak next year.

– Jim Jagielski , Red Hat

Quotes

POSSCON, which I would describe as a "boutique event," evokes the same feelings in me as a boutique hotel: charming, big on service, full of character, and a delight to visit. The conference is strong because it is organized by a well-integrated group of passionate people who want to bring the gospel of FOSS to a small yet growing southern city (Columbia, SC.).

– Paula Hunter , Microsoft

Quotes

POSSCON turned out to be a great event. The people at POSSCON were the nicest I've ever met.

– Matt Asay, COO - Canonical

The speaker lineup at POSSCON is world-class.

– Chris Wanstrath, CEO - GitHub

POSSCON reminds me of SCALE. This is an excellent event.

– Bdale Garbee, Hewlett Packard

Tracks

Technical



EMC²
where information lives[®]

INFOBRIGHT

Big Picture



PayPal[™]

Apache
SOFTWARE FOUNDATION

Education

sparkfun
ELECTRONICS

Google
SUMMER OF
CODE
2011

IBM

Demo



redhat

CANONICAL

firehost
WEB HOSTING SECURED.

Bringing Open Source to the Southeast

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2012
POSSCON
PALMETTO OPEN SOURCE SOFTWARE CONFERENCE

Technical

- AMQP, RabbitMQ
(Messaging)
- GIS
- C++11
- Mobile App Development
- Databases, NoSQL
- Groovy/Grails
- Boost Libraries
- Twitter
- The Cloud

Big Picture

- SC Dept. of Corrections
- Open Security-DHS
- Build a Business on Open Source
- Freedom Box
- Open Identity in Ecommerce
- Licensing
- Starting an Open Source Project
- Convert Projects to Open Source

Education

- Classes using Open Source
- Reforming K-12 Education using Open Source
- Google Summer of Code / Code-in
- Open Source in Art
- 3D Printing and Intellectual Property
- Kickstarter
- Open Hardware
- Classroom Adoption of Open Source

Speakers

- Scott McNealy Sun Microsystems
- Larry Augustin SugarCRM
- Jim Jagielski Apache Software Foundation
- Steve Graham EMC
- Chris Aniszczyk Twitter
- Bdale Garbee HP
- Jonathan LeBlanc PayPal
- Carol Smith Google
- Dave Abrahams Boost Consulting



Scott McNealy

One of the most influential and widely quoted leaders in the history of IT and perhaps the most interesting person in the world to have speak on the topic of open source.

Co-founder of Sun Microsystems at the age of 27, growing it into a 38,000 person company, strongly promoting open computing systems like the Java programming language and assuming the role of defender of the free computing world, he has literally changed the course of technology and open source history. He's a Silicon Valley veteran and legend, just behind Steve Jobs, Bill Gates and Larry Ellison.



Larry Augustin

Larry Augustin is CEO of SugarCRM and is a former venture capitalist and the co-founder and former chairman of VA Software, now known as Geeknet. He founded VA Research, the predecessor to that company, in 1993 while a Ph.D. student in electrical engineering at Stanford University. While at VA, he was one of the driving forces behind the creation of SourceForge, a popular collaborative software development management system.



He currently serves on the board of several companies, including DotNetNuke, Fonality, the Free Standards Group, JBoss, Linux International, MedSphere, the OSDL, Pentaho, SugarCRM, Hyperic, Compiere, Zend Technologies and Appcelerator. Larry Augustin was also featured in the 2001 documentary film Revolution OS.

So Far

- Changed perception of Columbia and SC in IT/software circles
- Positive coverage in IT/Open Source world—articles/blogs/twitter
- Heads-on-beds – actual
- Economic Development
- Workforce Development – hard and soft skills
- Better informed, more technically cultured community
- Business retention and expansion – perceived momentum + resulting synergy + pride
- Unprecedented opportunity
 - One of few OS conferences in South/East
 - Year 5 – start-up phase completed
 - Southeast's/South's Open Source City – Portland, OR

Bringing Open Source to the Southeast
DEVELOPERS • EDUCATORS • IT LEADERS IN BUSINESS, GOVERNMENT, HEALTHCARE AND SECURITY





1301 Gervais St.
Columbia, SC

<http://open-it-lab.com>



**OpenIT
Lab**

A stylized graphic of a tall antenna tower or skyscraper, composed of vertical white and black bars, rises from behind the text. A green and yellow circular signal pattern is positioned above the tower's peak.

IT-oLogy™

The word "IT-oLogy" is written in a bold, sans-serif font. The letters "IT" are blue, while "oLogy" is green. A small "TM" symbol is located at the top right of the "y". The entire logo is set against a light gray rectangular background.

Open-it-lab.com

Open Software

Open Source Software is software whose original source code is made freely available and may be redistributed with or without modification.

open-it-lab.com/open/software

Open Hardware

Open Hardware is hardware whose design is made publicly available so that anyone can study, modify, distribute, make and sell the design or hardware based on that design.

open-it-lab.com/open/hardware

Open Content

Open Content describes any kind of creative work, or content, published under a license that explicitly allows copying and modifying of its information by anyone.

open-it-lab.com/open/content



Awareness

A Dell Inspiron One 23 All-In-One touch-screen desktop, which serves as the PC platform.



A 24 inch iMac, which serves as the Macintosh platform.



A One Laptop Per Child (OLPC) machine, which contains the Sugar operating system.



A Zareason Media server - featuring Mythbuntu



An Arduino Uno, Open Source hardware.



A Thing-O-Matic, which is an Open Source 3D Printer. This is available to visitors to use and explore.



Education

- One Hour Lab Tour
- Open 101 (2hr - Intro/Ad, 4 hr - Intro/Ad)
- Open 101 for Teachers
- Ubuntu 101 -Introduction and Advanced
- Open 201 - Open Software in Depth
- Open 202 - Open Hardware in Depth
- System Administration 101 - OS included
- OS From the Geospatial Perspective



Research and Development

- Demonstrate that Open Source can be applied
- Students, teachers/professors, IT professionals can join a project and contribute
- Current project - Columbia Police Department
 - Make crime report information widely available
 - Web application
 - Mobile applications – Android, iPhone



Why?

- Educational
- Cool projects to work on in supportive environment
- Provides opportunity to get experience WITHOUT a job



Let's Imagine...

- Company/individual looking to open new office, look at Columbia
- Cost of living/quality of life, taxes, financial/relocation incentives
- Infrastructure needs – work space, broadband
- Education system (educated workforce), existing IT base, IT clusters
- Progressive/forward thinking/emerging



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Advancing IT Talent™

IT-oLogy Overview





IT-oLogy is a non-profit collaboration of businesses, academic institutions and organizations dedicated to growing the IT talent pipeline and advancing the IT profession.

IT-oLogy has 3 initiatives:



Promote IT

IT-oLogy works with K-12 schools to encourage students, parents and educators to learn more about the IT profession.



Teach IT

In collaboration with IT-oLogy, companies work with colleges and universities on applied business research projects and experiential learning opportunities that strengthen and align classroom skills to current and future IT business needs.



Grow IT

IT-oLogy partners with IT professionals and their companies to provide innovative and life-long learning and professional development opportunities.

Promote IT Goals & Objectives

Impact individuals and educators through related IT-oLogy and partner projects and events such as...

Student as Professional

Connecting high school students with professionals on an IT project meeting the need of a local non-profit, while providing valuable insight about IT roles and careers

cyber IQ

A grassroots campaign and workshop series to encourage middle school girls to surf the cyber world safely and to educate parents on the importance of cyber safety

Educator Field Studies

Developing repeatable field studies for K-12 educators and counselors, informing them about IT topics and enabling them to become effective advocates for IT careers (partner with MEBA)

Computer Camps

Enabling multi-day hands-on camps for students throughout the state run by volunteers from local universities

Virtual Job shadows

Developing Virtual Job Shadows, which play an important role in IT career exploration for young people who may not have access to onsite job shadows.

High School Level Internships/Job Shadows

Connecting high school students to business partners for experiential learning opportunities

K-12 Career Fairs

Presenting the profession of IT to K-12 students through presentations and hands-on activities to grow the interest in IT careers

K-12 Advisory Councils

Working with K-12 schools and educators to answer questions and make recommendations about current industry business practices and skills

Speakers Bureau

Identifying members of the IT community to speak to various audiences about IT careers

Teach IT Goals & Objectives

Impact students and educators through related IT-oLogy and partner projects and events such as...

Internships

Enabling valuable experiential learning opportunities through assisting companies to develop internship programs and facilitating matching of students to project opportunities

Campus Relations

Increasing awareness of IT careers through participation in career fairs and campus visits throughout the Southeast, connecting talent to internship programs and educating professors and career counselors on IT careers

Mainframe Academic Initiative

Supporting the environment housing the IBM system z mainframe, which provides valuable mainframe experience for students at college throughout the Southeast

IT Gateway

Connecting students and job seekers with employers in an online database system

Grow IT Goals & Objectives

Impact professionals and companies through related IT-oLogy and partner projects and events such as...

Development Opportunities

Working with partner companies and organizations to plan and conduct effective professional development programs, conferences and events

Examples include:

- Palmetto Open Source Software Conference
- Gartner's IT Modernization Conference
- Mayor's Cyber Security Summit
- Innoventure
- Carolina Technology Conference

Cross-Initiative Programs



The Open IT Lab, located at IT-oLogy, is a world-class, one-of-a-kind facility with a focus on Open Source awareness, education and research and development. Educational programs include the Open 101 Series and the Ubuntu 101 Series.

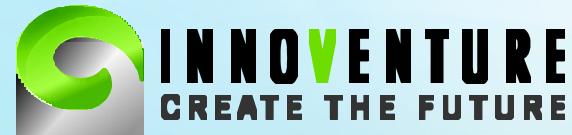
The Portal

The Portal is a gaming development lab located at IT-oLogy. This space provides opportunities for students and professionals to learn more about game development.

Organizational Partners



Gartner.



A Program Of The Greater Columbia Chamber Of Commerce



NEW CAROLINA
South Carolina's Council on Competitiveness



South Carolina
Association of
Colleges & Employers



Academic Partners



MARIST



IT-oLogy | Advancing IT Talent™

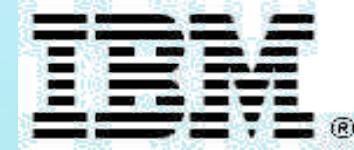


UNT



Corporate Partners

T-oLogy | Advancing IT Talent™



Acentron
Advanced Automation Consulting
Alpha Training & Services
Bi-Lo

BMW Group
Cisco Systems, Inc.
Colonial Life & Accident Insurance Company
Companion Data Services
CorLogix
Cyberwoven
DP Professionals
Edens & Avant

Globalpundits, Inc.
Google
Health Sciences South Carolina
Hubbell Inc.
Immedion
JBE Enterprises
Long Arc Learning
Michelin North America, Inc.
Microburst Learning
New Horizons SC
Palmetto Computer Labs
Palmetto Health

Redhat
SC Technical College System
Servosity
SiteCore
That Computer Store
The Mariner Group, LLC
Time Warner Cable
TM Floyd & Company
USC Technical Services
VC3
Verizon Wireless
Zipit Wireless



We would not be able to grow the IT talent pipeline without the support of our corporate, academic and organizational partners.

Thank you for being a part of IT-oLogy!

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